Claims:

1. A method of treating cancer in an individual comprising administering an Aurora kinase inhibitor and a mitotic spindle assembly inhibitor to said individual.

2. A method according to claim 1 wherein said tumour cell is resistant to said agent that inhibits mitotic spindle assembly.

3. A method according to claim 1 or claim 2 wherein the mitotic spindle assembly inhibitor is a taxane.

4. A method according to claim 3 wherein the taxane is paclitaxel or a derivative thereof.

5. A method according to any one of claims 1 to 4 wherein the Aurora kinase inhibitor is selected from the group consisting of 4-(4-(*N* benzoylamino)anilino)-6- methoxy-7-(3-(1 morpholino)propoxy)quinazoline and Hesperadin.

6. A method according to any one of claims 1 to 4 wherein the Aurora kinase inhibitor is an antibody molecule which specifically binds to an Aurora kinase.

7. A method according to any one of claims 1 to 4 wherein the Aurora kinase inhibitor is a sense or anti-sense nucleic acid molecule that inhibits the expression of an Aurora kinase.

8. A method according to any one of claims 1 to 7 wherein the cancer is an epithelial cancer.

9. A method according to claim 8 wherein the epithelial cancer is skin, thyroid, colon, pancreas, lung, prostate, cervical, ovarian or breast cancer.

10. A method according to any one of claims 1 to 7 wherein the cancer is liver, kidney or brain cancer.

11. A method of sensitising a tumour cell in an individual to an agent which inhibits mitotic spindle assembly comprising administering an Aurora kinase inhibitor to the individual.

12. A method according to claim 11 wherein said tumour cell is resistant to said agent which inhibits mitotic spindle assembly.

13. A method according to claim 11 or claim 12 wherein the mitotic spindle assembly inhibitor is a taxane.

14. A method according to claim 13 wherein the taxane is paclitaxel or a derivative thereof.

15. A method according to any one of claims 11 to 14 wherein the Aurora kinase inhibitor is selected from the group consisting of 4-(4-(*N* benzoylamino)anilino)-6- methoxy-7-(3-(1 morpholino)propoxy)quinazoline and Hesperadin.

16. A method according to any one of claims 11 to 14 wherein the Aurora kinase inhibitor is an antibody molecule which specifically binds to an Aurora kinase.

17. A method according to any one of claims 11 to 14 wherein the Aurora kinase inhibitor is a sense or anti-sense nucleic acid molecule which inhibits the expression of an Aurora kinase.

18. A pharmaceutical composition comprising an Aurora kinase inhibitor and a mitotic spindle assembly inhibitor.

19. A pharmaceutical composition according to claim 18 comprising a pharmaceutically acceptable excipient.

20. A composition according to claim 18 or claim 19 wherein the mitotic spindle assembly inhibitor is a taxane.

21. A composition according to claim 20 wherein the taxane is paclitaxel or a derivative thereof.

22. A composition according to any one of claims 18 to 21 wherein the Aurora kinase inhibitor is selected from the group consisting of 4-(4-(*N* benzoylamino)anilino)-6- methoxy-7-(3-(1 morpholino)propoxy)quinazoline and Hesperadin.

23. A method of determining the resistance of a tumour cell to a mitotic spindle assembly inhibitor comprising; measuring the expression of Aurora

kinase in said tumour cell, elevated expression of Aurora kinase in said tumour cell relative to a non-tumour cell being indicative of the resistance of said tumour cell to the agent.

24. A method according to claim 23 wherein the mitotic spindle assembly inhibitor is a taxane.

25. A method according to claim 24 wherein the taxane is paclitaxel.

26. A method according to any one of claims 23 to 25 wherein the expression of Aurora kinase in said cell is measured by determining the amount of Aurora kinase RNA in said cell.

27. A method according to any one of claims 23 to 25 wherein the expression of Aurora kinase in said cell is measured by determining the copy number in said cell of nucleic acid that encodes Aurora kinase.

28. A method according to any one of claims 23 to 25 wherein the expression of Aurora in said cell is measured by determining the amount of Aurora kinase polypeptide in said cell.

29. A method according to any one of claims any one of claims 23 to 28 wherein the Aurora kinase is Aurora A.

30. A kit for use in a method of determining the sensitivity of a tumour cell to a mitotic spindle assembly inhibitor comprising oligonucleotide

primers suitable for specific amplification of an Aurora kinase nucleic acid sequence.

31. A kit for use in a method of determining the sensitivity of a tumour cell to a mitotic spindle assembly inhibitor comprising an antibody molecule which binds specifically to an Aurora kinase.

32. A kit according to claim 31 comprising a labelled secondary antibody and one or more label detection reagents.

33. Use of an Aurora kinase inhibitor and a mitotic spindle assembly inhibitor in the manufacture of a medicament for the treatment of cancer in an individual.

34. Use according to claim 33 wherein the mitotic spindle assembly inhibitor is a taxane.

35. Use according to claim 34 wherein the taxane is paclitaxel or a derivative thereof.

36. Use according to any one of claims 33 to 35 wherein the Aurora kinase inhibitor is selected from the group consisting of 4-(4-(*N* benzoylamino)anilino)-6- methoxy-7-(3-(1 morpholino)propoxy)quinazoline and Hesperadin.

37. Use according to any one of claims 33 to 35 wherein the Aurora kinase inhibitor is an antibody molecule which specifically binds to an Aurora kinase.

38. Use according to any one of claims 33 to 35 wherein the Aurora kinase inhibitor is a sense or anti-sense nucleic acid molecule which inhibits the expression of an Aurora kinase.

39. Use according to any one of claims 33 to 38 wherein the cancer is an epithelial cancer.

40. Use according to claim 39 wherein the epithelial cancer is skin, thyroid, colon, pancreas, lung, prostate, cervical, ovarian or breast cancer.

41. Use according to any one of claims 33 to 38 wherein the cancer is liver, kidney or brain cancer.

42. Use of an Aurora kinase inhibitor in the manufacture of a medicament for use in a method of sensitising a tumour cell to an agent which inhibits mitotic spindle assembly.

43. Use according to claim 42 wherein said tumour cell is resistant to the agent which inhibits mitotic spindle assembly.

44. Use according to claim 42 or claim 43 wherein the mitotic spindle assembly inhibitor is a taxane.

45. Use according to claim 44 wherein the taxane is paclitaxel or a derivative thereof.

46. Use according to any one of claims 42 to 45 wherein the Aurora kinase inhibitor is selected from the group consisting of 4-(4-(*N*

benzoylamino)anilino)-6- methoxy-7-(3-(1 morpholino)propoxy)quinazoline and Hesperadin.

47. Use according to any one of claims 42 to 45 wherein the Aurora kinase inhibitor is an antibody molecule which specifically binds to an Aurora kinase.

48. Use according to any one of claims 42 to 45 wherein the Aurora kinase inhibitor is a sense or anti-sense nucleic acid molecule which inhibits the expression of an Aurora kinase.

49. Use according to any one of claims 42 to 48 wherein the cancer is an epithelial cancer.

50. Use according to claim 49 wherein the epithelial cancer is skin, thyroid, liver, colon, pancreas, lung, prostate, cervical, ovarian or breast cancer.

51. Use according to any one of claims 42 to 48 wherein the cancer is liver, kidney or brain cancer.